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09/752,817	01/03/2001	Shunpei Yamazaki	12732-003001/US4564	9971

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EXAMINER
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KUMAR, SRILAKSHMI K

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2629

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

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### **DETAILED ACTION**

The following office action is in response to the request for reconsideration filed on November 25, 2008. Claims 5-12, 18-22, 29-53, 59-63 are pending.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 5, 7-10, 12, 18-20, 22-26, 28-31, 33-37, 39-53, and 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6,265,833) in view of Ikeda et al (US 5,714,968) and further in view of Yamaguchi et al (US 6,853,083), and further in view of Young et al (US 5,075,596).

As to independent claims 5, 10 and 34, Kim et al teach a display system comprising; a plurality of pixels; each of said plurality of pixels comprising at least an EL element (col. 1, lines 10-16, col. 9, lines 57-63); a sensor for obtaining an information signal of an environment (Fig.

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1, item 1), a CPU for converting said information signal of the environment supplied from said sensor into a correction signal (Fig. 1, item 3), and a voltage changer for changing a corrected potential applied to the EL element based on said correction signal (Fig. 1, item 4); an EL driving power source connected to said voltage changer (Fig. 3). Kim et al do not disclose the details of the EL display device. Kim et al do not disclose wherein the EL element has a first electrode and a second electrode. Kim et al do not disclose wherein said voltage changer is electrically connected to the second electrode of the EL element via a switch nor wherein the first electrode of the EL element is electrically connected to a power supply line. Ikeda teaches wherein the EL element comprises a first electrode and a second electrode in Fig. 10, item 21. Ikeda teaches the voltage changer (34) is electrically connected to the second electrode of the EL element via a switch (22) (see figure 10). In Fig. 5, item 1, and col. 6, line 64-col. 7, line 12, Ikeda teaches wherein the first electrode of the EL element is electrically connected to a power supply line (25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the active EL matrix display details as illustrated by Ikeda when implementing the system items 4 and 5 of Kim et al because Kim et al lacks these specific manufacturing details directed towards the actual EL circuit within the display therefore one of ordinary skill would have been motivated to simply use Ikeda's active matrix to the display device of Kim because active matrix display device of Ikeda is capable of prolonging light emission of the light emitting elements, thereby protecting the user from having to view a display where the light flickers (col. 2, lines 7-13 of Ikeda). While Kim and Ikeda teach wherein the first electrode of the EL element is electrically connected to a power supply line, they fail to teach where the connection is via the transistor of the pixel including the EL element. Yamaguchi et al

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teach in Fig. 4, where the EL element (406) is electrically connected to a power supply line (Vdd) via the transistor (405) of the pixel including the EL element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of the connection via the transistor of the pixel including the EL element as taught by Yamaguchi into the display system of Kim as modified by Ikeda as the connection enables controlling of the current applied to the EL elements (Yamaguchi col. 2, lines 30-35) and provides a TFT to be used in the display to prevent short circuit and disconnection in the EL display device in order to promote high reliability of the display device (Yamaguchi et al, col. 1, lines 54-61).

Kim as modified by Ikeda and Yamaguchi do not teach wherein the switch is provided in an external portion. Young et al teach a display system in Fig. 6, where item 5 is the pixel, item 13 is the voltage changer and a switch, item 14, which is external to the pixel. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the switch in an external portion as taught by Young et al into Kim as modified by Ikeda and Yamaguchi in order to enable signals from the voltage changer to the pixels for proper displaying of images.

As to claim 7, the combination of Kim et al and Ikeda teaches a display system according to claim 5, further comprising, Kim et al disclose wherein said plurality of pixels, said sensor, said CPU and said voltage changer are formed on a same substrate (Fig. 1 illustrates all the claimed pads in one illustration it is obvious that they are capable of sharing a common substrate while enclosed above said common surface of an enclosure).

As to claim 8, the combination of Kim et al. and Ikeda teach a display system according to claim 5, further comprising, Kim et al disclose wherein said EL element comprises an organic material or an inorganic material (Fig. 1, item 5, col. 1, lines 10-15).

As to claims 9, 12, limitations of claims 5 and 10, Kim et al disclose wherein said display system is incorporated in one selected from the group consisting of a video camera, a digital camera, a head mount display, a car navigation system, a portable telephone, an image reproduction apparatus, a car audio equipment, and a personal computer (col. 10, lines 21-34 and further these specific uses of the display are viewed as merely being recitations directed towards an OBVIOUS INTENDED USE of the display).

As to claim 18, limitations of claims, 5 and 12, Kim et al do not disclose wherein an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer. Ikeda discloses wherein an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer in Figs. 12 and 16, col. 10, lines 33-col. 11, line 20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of an EL element comprising at least an EL layer between an anode and a cathode, one of said anode and said cathode being electrically connected to said active layer as taught by Ikeda into the display system of Kim et al because active matrix display device of Ikeda is capable of prolonging light emission of the light emitting elements, thereby protecting the user from having to view a display where the light flickers (col. 2, lines 7-13 of Ikeda). Kim as modified by Ikeda and Yamaguchi do not teach wherein the switch is provided in an external portion. Young et al teach a display system in Fig. 6, where item 5 is the

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pixel, item 13 is the voltage changer and a switch, item 14, which is external to the pixel. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the switch in an external portion as taught by Young et al into Kim as modified by Ikeda and Yamaguchi in order to enable signals from the voltage changer to the pixels for proper displaying of images

As to claim 19, 40 limitations of claim 13, and further comprising, Kim et al disclose wherein said sensor comprises a CCD or a photo diode (Fig. 1, item 1, an optical sensor responsive to light).

As to claims 20, 22, 29-31, 33, 35, 37 and 39, the combination of Kim et al and Ikeda, Yamaguchi and Young et al were shown above to read on these limitations.

As to claims 25 and 36, Kim et al disclose an A/D converter interposed between said sensor and said CPU, and a D/A converter interposed between said CPU and said voltage changer (Fig. 1, the CPU controller uses A/D for it's input and D/A for its output while interacting with analog devices.)

As to claims 41-44, Kim teaches wherein the EL element comprises an organic material or an inorganic material (col. 1, lines 11-16).

As to claims 45-48, Yamaguchi et al teaches wherein the transistor is a current controlling thin film transistor (col. 2, lines 30-35).

As to claims 49-53, Ikeda teaches in Fig. 5 a switching thin film transistor (2) electrically connected to a gate electrode of the current control thin film transistor (3).

As to claims 59-63, Kim does not teach wherein the thin film transistor comprises monocrystalline semiconductor film. Ikeda teaches in col. 12, lines 42-45 wherein the tfts

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comprise monocrystalline semiconductor film. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include where the TFT comprise monocrystalline semiconductor film as taught by Ikeda into Kim et al as the monocrystalline semiconductor film enables high speed performance of the TFT.

4. Claims 6, 11, 21, 32 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Ikeda and Yamaguchi and Young et al as applied to claims 5, 10, 13, 18, 23, 29, and 34 above, and further in view of Poulton (US 5,702,323).

As to claims 6, 11, 21, 32 and 38, Kim et al and Ikeda do not teach wherein said information signal comprises a user's living body information. Poulton teaches wherein said information signal comprises a user's living body information (abstract, Fig. 5, item 230, col. 2, lines 48-57, col. 4, lines 3-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the optical sensor item 1 as illustrated by Kim to also keep track of body pads position as done by Poulton when implementing the system item 1 of Kim et al because this limitation is merely directed towards an OBVIOUS INTENDED USE, of the combination of Kim et al and Ikeda et al as illustrated by Poulton, and further, Poulton gives motivation in col. 1, lines 5-10 for modifying the use of the Kim item 1 which Poulton provided a further illustration of an additional "use" for the information given by an optical sensor.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 5-12, 18-22, 29-53, and 59-63 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***



Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRILAKSHMI K. KUMAR whose telephone number is (571)272-7769. The examiner can normally be reached on 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Srilakshmi K Kumar/  
Examiner  
Art Unit 2629

SKK  
February 12, 2009